

## BIBLIOGRAPHY

C. FITZHUGH TALMAN, in charge of Library

## RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

*Alessandri, Camillo.*

Geofisica; meteorologia, aerologia e pireliometria. Bologna. [1931.] xix, 565 p. diagrs. 31½ c. (Spedizione italiana di Filippi nell' Himalaia, Caracorum e Turchestan cinese (1913-1914). [Relazioni scientifiche]. Ser. I. Geodesia e geofisica. vol. 3.)

*Bigelow, Henry Bryant.*

Oceanography; its scope, problems, and economic importance. Boston. 1931. 262 p. 21 cm.

*Clyde, George D.*

Snow-melting characteristics. Logan. n. d. 48 p. illus. 23 cm. (Utah agric. exp. sta. Bull. 231 (Tech.). Aug., 1931.)

*Gavilan, Alfonso Reyes.*

Compendio sobre los ciclones tropicales . . . Habana. 1930. 30 p. 19½ cm.

*Heyde, Gustav.*

Recording balloon theodolite. p. 36-37. illus. 27½ cm. (Instrument world. v. 4, June, 1931.)

*Italy. Ufficio presagi.*

I principali tipi isobarici interessanti l'Italia (quinquennio 1926-1930). Roma. 1931. 11 p. plates (fold.) 23 cm.

*Jaumotte, J.*

Sur l'anémomètre de Robinson. 4 p. fig. 27½ cm. (Cong. nat. des sci.)

*Koch, J. P., & Wegener, A.*

Wissenschaftliche Ergebnisse der dänischen Expedition nach Dronning Louises-Land und quer über das Inlandeis von Nordgrönland 1912-13 unter Leitung von Hauptmann J. P. Koch. København. 1930. Abt. 1-2. illus. plates (fold.) 28½ cm. (Meddelelser om Grönland. Bd. 75. 1-2 Afd.)

*Lewis, W. W., & Foust, C. M.*

Direct strokes to transmission lines. p. 452-458. illus. 30½ cm. (Gen. elec. rev., v. 34, no. 8. Aug., 1931.)

*Lugeon, Jean.*

Rapport général sur la question des relations entre les précipitations atmosphériques, le débit et l'évaporation. 13 p. 23½ cm. (Compte rendu des trav. III-ème confér. hydrol. des États balt. tenue à Warszawa en mai 1930. Warszawa. 1931.)

Réflexions sur les méthodes d'investigation en hydro-météorologie. Warszawa. 1930. 15 p. fig. 23½ cm. (III-ème confér. hydrol. des États balt. Warszawa. mai 1930.)

Remarques sur la participation de la Pologne à l'année polaire 1932/33. Warszawa. 1931. 4 p. 24 cm. (Bull. soc. géophys. de Varsovie. Pub. trimest. 1931. I. fasc.) [Author, title, and text in Polish and French.]

*Lundegårdh, Henrik Gunnar.*

Environment and plant development being "Klima und Boden in ihrer Wirkung auf das Pflanzenleben" trans. & ed. from the 2nd German edition, by Eric Ashby . . . London. 1931. xii, 330 p. illus. (incl. maps). pl. diagrs. 23½ cm.

*McAdie, Alexander.*

Airgraphics. Cambridge. 1931. 37 p. diagr. front. 30 cm.

*Mares, David J.*

Know your own weather; popular studies in Australian meteorology. Sydney. 1930. 7,138 p. front. illus. maps. diagrs. 19 cm. Bibliography: p. [131].

*Negretti & Zambra.*

Standard meteorological instruments. [Bolton. 1931.] 140 p. illus. 25½ cm. (List M. 2.)

*Ray, C. L.*

Tipos frecuentes de las condiciones del tiempo en San Juan de Puerto Rico. p. 185-189. 30 cm. (Rev. de obras pub. de Puerto Rico. Año 8, no. 8, Ago. 1931.)

*Schmitt, Wilhelm.*

Föhnerscheinungen und Föhnegebiete. Innsbruck. 1930. 64 p. figs. plates (part fold.) 28 cm. (Wissenschaftl. Veröffentl. des D. u. Oe. Alpenvereins. 8.)

*Smith, Edward H.*

Arctic ice, with especial reference to its distribution to the North Atlantic ocean. Washington, 1931. x, 221 p. illus. 23½ cm. (U. S. Coast guard. Bull. no. 19. Marion exped. to Davis Strait and Baffin Bay under the direction of the U. S. Coast Guard. 1928. Sci. results. pt. 3.)

## SOLAR OBSERVATIONS

SOLAR RADIATION MEASUREMENTS DURING SEPTEMBER  
1931

By HERBERT H. KIMBALL, Solar Radiation Investigations

For a description of instruments employed and their exposures, the reader is referred to the January, 1931, REVIEW, page 41.

Table 1 shows that solar radiation intensities averaged below the normal values for September at all three stations at which measurements of direct solar radiation at normal incidence are made.

Table 2 shows an excess in the total solar radiation received on a horizontal surface at New York, Pittsburgh, La Jolla, Fresno, Lincoln, and Chicago, close to the September average at Madison and Gainesville, and a deficiency at Washington and Twin Falls.

Skylight polarization measurements made on 5 days at Washington gave 56 for the mean percentage of polarization with a maximum of 64 on the 9th. At Madison, polarization measurements made on 11 days gave a mean of 61 per cent with a maximum of 71 per cent on the 11th. These are close to the corresponding averages for each station in September.

TABLE 1.—*Solar radiation intensities during September, 1931*

[Gram-calories per minute per square centimeter of normal surface]

Washington, D. C.

Date	Sun's zenith distance										Local mean solar time	
	Air mass											
	A. M.					P. M.						
e.	5.0	4.0	3.0	2.0	1.0	2.0	3.0	4.0	5.0	e.		
mm.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	cal.	mm.		
Sept. 1	15.11	0.58	0.71								16.74	
	12.68	0.58	0.71	0.93	1.29						9.16	
Sept. 8	8.81	0.67	0.77	0.91	1.04	1.36					6.76	
Sept. 9	11.81	0.65	0.78	0.92	1.02	1.19					12.68	
Sept. 10	17.37		0.49	0.66	1.07	0.98	0.73	0.61			17.37	
Sept. 11	18.56		0.46	0.77	0.98						19.89	
Sept. 12	19.23		0.55	0.78	1.05						17.37	
Sept. 14	16.20		0.71	0.79	0.98	1.31					17.96	
Sept. 18	19.89				1.48						10.97	
Sept. 19	10.21	0.63	0.77	0.97	1.24						10.59	
Sept. 22	21.28		0.86	1.02	1.17						22.00	
Sept. 25	6.27		1.13	1.26							7.57	
Sept. 29	5.79	0.86	0.99	1.13	1.30	1.47	1.22				5.36	
Sept. 30	8.48	0.61	0.73	0.90	1.08		1.05	0.81	0.71	0.56	8.18	
Means		0.70	0.72	0.79	0.98	1.24	1.08	(0.77)	(0.66)	(0.56)		
Departures		+0.01	-0.03	-0.07	-0.06	-0.07	+0.03	-0.07	-0.06	-0.10		

<sup>1</sup> Extrapolated.